UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,735	10/31/2003	Ravinder Prakash	CHA920030024US1	3130

23550 7590 12/28/2006	EXAMINER
HOFFMAN WARNICK & D'ALESSANDRO, LLC	KRASNIC, BERNARD
75 STATE STREET	

ART UNIT	PAPER NUMBER
2621	

14TH FLOOR
ALBANY, NY 12207

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10-31-2003*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Specification

1.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2.   The abstract of the disclosure is objected to because it is not narrative. It consists and has been drafted as one long run on sentence, much like claim 1, which is improper. The intent of the abstract is to give a concise but brief statement of the disclosure or the invention as a whole consisting of a series of complete sentences forming a single paragraph.

Correction is required. See MPEP § 608.01(b).

3.   The disclosure is objected to because of the following informalities:

It is necessary to include line numbering throughout the specifications.

Page 8, line 6: "measurements 1.52" should be -- measurements 1.50 -- as shown in page 9, line 6 of the specification and as shown in Fig. 3, under buffer 42.

Appropriate correction is required.

Claim Objections

4.   Claims 4, 12, and 19 are objected to because of the following informalities:

Re Claim 4, line 1, Claim 12, line 1 respectively: "the position information system"

should be -- the position collection system --.

Re Claim 12, line 4: "containing the printed character" should be -- containing a

printed character --.

Re Claim 19, line 2: "the step of determining if characters" should be -- a step of

determining if characters --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1, 2, 8, 9, 11, 16, and 20 rejected under 35 U.S.C. 102(b) as being

anticipated by Tyburski et al (US 3,764,978).

Re Claims 1, 8, 16, and 20 respectively: Tyburski, <u>as recited in claim 1</u>, discloses a character recognition system (see Fig. 1, Abstract, lines 1-3), comprising at least one transducer / OCR (4) and MICR (2) system for scanning printed character data and generating a plurality of sets / two sets (one for the OCR and one for the MICR) of transduced character information / output of OCR (4) and MICR (2) (see Fig. 1, Abstract, lines 1-3, col. 2, lines 65-67, col. 1, lines 39-49, col. 3, lines 51-52); a position collection system / synchronization circuitry (6) for collecting positional data / corresponding recognition signals (17, 18) for characters in each set of transduced / OCR and MICR character information (see Fig. 1, col. 3, lines 57-64, the synchronization circuit waits using delays to get the same positioned character data from the OCR and MICR which therefore uses positional data for such correspondences); a character position synchronization system / synchronization circuit (6) for positionally synchronizing corresponding characters from different sets of transduced / OCR and MICR character information (see Fig. 1, col. 3, lines 51-64, the synchronization circuit waits using delays to get the same positioned character data from the OCR and MICR using feed speed data); and a voting engine / minicomputer for receiving the positionally synchronized sets of transduced character information (see col. 4, lines 16-22, col. 1, lines 39-49, the minicomputer using the synchronized recognition signals from the OCR and the MICR, correlates the two signals and decides a best match).

As to claim 8, it differs from claim 1 in that claim 8 is claimed more broadly. Therefore, all the limitations in claim 8 respectively are analyzed and taught by Tyburski in the same manner as Tyburski taught claim 1 above.

As to claim 16, it differs from claim 1 in that claim 1 is an apparatus claim whereas claim 16 is a method claim. Therefore, all the limitations in claim 16 respectively are analyzed and taught by Tyburski in the same manner as Tyburski taught claim 1 above.

As to claim 20, it differs from claim 1 in that claim 1 is an apparatus claim whereas claim 20 is a means plus function claim. Therefore, all the limitations in claim 20 respectively are analyzed and taught by Tyburski in the same manner as Tyburski taught claim 1 above.

The limitations, as recited in claim 20, "means for collecting" in line 3, and "means for positionally synchronizing" in line 5, invoke 35 USC 112, 6th paragraph.

Re Claim 2: Tyburski discloses an optical character recognition (OCR) (4) transducer and a magnetic ink character recognition (MICR) (2) transducer (see Fig. 1, Abstract, lines 1-3).

Re Claim 9: Tyburski discloses at least one transducer system / OCR (4) and MICR (2) for scanning printed character data and generating the corresponding sets / two sets (one for the OCR and one for the MICR) of transduced character information / output of

OCR (4) and MICR (2) (see Fig. 1, Abstract, lines 1-3, col. 2, lines 65-67, col. 1, lines

39-49, col. 3, lines 51-52).

Re Claim 11: Tyburski discloses a voting engine / minicomputer for processing the

corresponding sets / corresponding recognition signals (17, 18) of transduced character

information (see col. 4, lines 16-22, col. 1, lines 39-49, the minicomputer using the

synchronized recognition signals from the OCR and the MICR, correlates the two

signals and decides a best match).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 3-7, 10, 12-15, 17-19, and 21-22 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Tyburski as applied to claims 1, 8, 16, and 20 above, and

further in view of Ott et al (US 5,754,674). The teachings of Tyburski are described

above.

Re Claims 7, 15, 19, and 22 respectively: Tyburski, as recited in claim 7, discloses the

character position synchronization system / synchronization circuit (6) determines if

characters from different sets of transduced characters / OCR and MICR correspond to

each other by matching / minicomputer the position measurement of the characters in

different sets, within a predetermined tolerance (see col. 4, lines 16-22, col. 1, lines 39-

49, the minicomputer using the synchronized recognition signals from the OCR and the

MICR, correlates the two signals and decides a best match, the predetermined

tolerance limitation is silent but a matching between two signals could only be done by

some type of parameters which consider tolerance).

As to claim 15, all the limitations respectively are analyzed and taught by

Tyburski in the same manner as Tyburski taught claim 7 above.

As to claim 19, it differs from claim 7 in that claim 7 is an apparatus claim

whereas claim 19 is a method claim. Therefore, all the limitations in claim 19

respectively are analyzed and taught by Tyburski in the same manner as Tyburski

taught claim 7 above.

As to claim 22, it differs from claim 7 in that claim 7 is an apparatus claim

whereas claim 22 is a means plus function claim. Therefore, all the limitations in claim

22 respectively are analyzed and taught by Tyburski in the same manner as Tyburski

taught claim 7 above.

The limitation, as recited in claim 22 "means for positionally synchronizing" in line

1, invokes 35 USC 112, 6th paragraph.

However, Tyburski fails to disclose or fairly suggest that the plurality of sets are

based on different gray-scale level settings and that a position measurement provides a

distance from the character or the center of a character to a predetermined location

such as an edge of a document.

Ott, <u>as recited in claim 3</u>, discloses at least one transducer system (taught by

Tyburski above) generates a plurality of sets (taught by Tyburski above) of transduced

character information based on different gray-scale level settings / normal sensitivity

and higher sensitivity (see Abstract, lines 1-4, col. 2, lines 60-68, col. 5, lines 14-19 and

lines 43-44).

As to claim 10, all the limitations respectively are analyzed and taught by Ott in

the same manner as Ott taught claim 3 above.

Ott, <u>as recited in claim 4</u>, discloses the position information system (taught by

Tyburski above) generates a position measurement for each character (taught by

Tyburski above) in the at least one set of transduced character information, wherein

each position / X-Y coordinate measurement provides a distance from the character to a

predetermined location on a document containing the printed character data (see

Abstract, lines 6-10, col. 7, lines 36-39, col. 8, line 4, X-Y coordinate is based on seed-

pixel or object or character location on an image and pixel locations tell the distance

from the top left edge of a document to the pixel being considered).

As to claim 12, all the limitations respectively are analyzed and taught by Ott in

the same manner as Ott taught claim 4 above.

As to claim 17, it differs from claim 4 in that claim 4 is an apparatus claim

whereas claim 17 is a method claim. Therefore, all the limitations in claim 17

respectively are analyzed and taught by Ott in the same manner as Ott taught claim 4 above.

As to claim 21, it differs from claim 4 in that claim 4 is an apparatus claim whereas claim 21 is a means plus function claim. Therefore, all the limitations in claim 21 respectively are analyzed and taught by Ott in the same manner as Ott taught claim 4 above.

Ott, as recited in claim 5, discloses the predetermined location includes an edge of the document (see Abstract, lines 6-10, col. 7, lines 36-39, col. 8, line 4, X-Y coordinate is based on seed-pixel or object or character location on an image and pixel locations tell the distance from the top left edge of a document to the pixel being considered).

As to claim 13, all the limitations respectively are analyzed and taught by Ott in the same manner as Ott taught claim 5 above.

As to claim 18, it differs from claim 5 in that claim 5 is an apparatus claim whereas claim 18 is a method claim. Therefore, all the limitations in claim 18 respectively are analyzed and taught by Ott in the same manner as Ott taught claim 5 above.

Ott, as recited in claim 6, discloses each position measurement provides a distance from a middle point of the character to the predetermined location (see Abstract, lines 6-10, col. 7, lines 36-39, col. 8, lines 4-18, X-Y coordinate is based on seed-pixel or object or character location on an image and pixel locations tell the

distance from the top left edge of a document to the pixel being considered which could be the middle point of the object or character).

As to claim 14, all the limitations respectively are analyzed and taught by Ott in the same manner as Ott taught claim 6 above.

Therefore, in view of Ott, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tyburski's character recognition system and method by including the capabilities for getting sets of character information based on different gray-scale level settings and for providing a distance from the character to a predetermined location, to the transducer system and to the position collection system of Tyburski in order to capture low contrast information features that would not normally be recorded at the normal sensitivity threshold and in order to further verify image quality and legibility.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Murdock et al (US 5,418,864) discloses a method for identifying and resolving erroneous characters output by an optical character recognition system; Lau et al (US 6,370,266 B1) discloses a financial document processing system and method of operating a financial document processing system to verify zone coordinates; Neri et al (US 6,453,061 B1) discloses a method of controlling banknotes; Wustmann et al (US 5,864,629) discloses a character recognition methods and apparatus for locating and extracting predetermined data from a document; Hayosh et al (US 6,611,598 B1)

discloses a self-authentication of value documents using encoded indices; Hongo et al

(US 4,556,985) discloses a pattern recognition apparatus; Simonoff et al (US 6,195,453

B1) discloses a method for laser printing MICR encoded negotiable instruments from

graphic images; Kruppa et al (US 6,243,504 B1) discloses an integrated magnetic ink

character recognition system and method therefor; Nally (WO 89/07804 A1) discloses a

qualification system for printed images; Courtney et al (US 5,519,786) discloses a

method and apparatus for implementing a weighted voting scheme for multiple optical

character recognition systems; Volpa et al (US 2005/0047641 A1) discloses a method

and apparatus for determining unknown magnetic ink characters; Kelland et al (US

6,870,947 B2) discloses a method of processing items in a check processing system

and an apparatus therefor; Fujisawa, H. from a preceding of the IEEE discloses

"Segmentation Methods for Character Recognition: From Segmentation to Document

Structure Analysis".

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-

1357. The examiner can normally be reached on Mon-Thur 8:00am-3:00pm and every

other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic
December 13, 2006

JONG SUK LEE
SUPERVISORY PATENT EXAMINER